

Notice of Allowability

Application No.

09/802,188

Examiner

Dan I. Davidson

Applicant(s)

TAKAISHI, KAZUHIKO

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 26, 2004.
2. ☒ The allowed claim(s) is/are 1, 3, 5-8, 10, 12-14 renumbered as 1-10.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT AND REASONS FOR ALLOWANCE

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Josh C. Snider on June 2, 2005.

The application has been amended as follows: the abstract of the disclosure follows directly on the next page of the Office Action:

ABSTRACT OF THE DISCLOSURE

In a head positioning method and device in which the position of servo signals between heads is not uniform, it is aimed to reduce the time taken to find the servo signals when heads are switched. A storage disk device comprises storage disks with the servo signals, a plurality of heads that read the information from the storage disks, an actuator that moves the heads, and a control circuit that positions the heads based on the servo signals read from the storage disks by a selected head. This control circuit includes a synchronization circuit that, in response to a head switching cue, synchronizes the time of a servo gate signal (of the head to which switching is directed) for detecting a servo signal with the time of the servo signal read by the head to which switching is directed, and a processing circuit that reads the servo signal for the head in response to the synchronized detection signal and positions the head in response to the servo signal read.

Art Unit: 2651

2. The following is an examiner's statement of reasons for allowance:

Re claims 1 and 8; the prior art of record, and in particular Tigner (US 6,208,480 B1), fails to disclose or suggest a head positioning control method (or device) for a storage disk device, comprising: a step (or circuit) of determining a time for reading the servo signal of the switched head in response to the head switching cue, the determining step comprising: a step of reading a first discrepancy time between the standard head and the current head, and reading a second discrepancy time between the standard head and the switched head; and a step of calculating the time difference between the first and second discrepancy times to determine the time.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. The annotated marked-up drawings filed December 8, 2003 have been approved. Clean copy replacement drawings must still be provided.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan I. Davidson whose telephone number is (571) 272-7552. The examiner can normally be reached on Mondays, Tuesdays, and Thursdays from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth, can be reached on (571) 272-7843. The fax phone

Art Unit: 2651

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DID
Dan I Davidson
June 2, 2005



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2601

3408.65517

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

International U.S. Application of:

Applicant(s): Kazuhiuko Takaishi

Serial No.: 09/802,188

Conf. No.: 5899

Filed: March 8, 2001

For: HEAD POSITIONING
CONTROL METHOD AND
DEVICE FOR STORAGE
DISK APPARATUS

Art Unit: 2651

Examiner: Dan Davidson

I hereby certify that this paper is being deposited with the United States Postal Service as FIRST-CLASS mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date.

December 4, 2003

Date

James K. Folker
Attorney for Applicant(s)
Registration No. 37,538

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Technology Center 2600

LETTER TO THE DRAFTSMAN

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please approve the change shown in red in the attached marked-up copy of FIGs. 4, 7, 8, and 10.

Respectfully submitted,

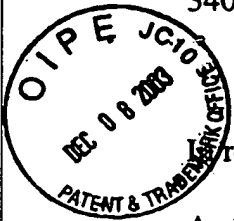
GREER, BURNS & CRAIN, LTD.

By

James K. Folker
James K. Folker
Registration No. 37,538

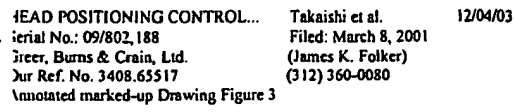
300 South Wacker Drive -- Suite 2500
Chicago, Illinois 60606
Telephone: (312) 360-0080
Facsimile: (312) 360-9315
Customer Number 24978

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Approved
DJD
6/2/05

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TC 2600



The diagram illustrates a servo track layout. It features a grid of servo marks arranged in a circular pattern. The grid is divided into four columns labeled "Servo Mark", "Track", "PosA", "PosB", "PosC", and "PosD". A large circle is drawn around the servo marks, with an arrow indicating the "Circumference direction" (clockwise) and another arrow indicating the "Radius direction" (outward from the center). The servo marks are represented by small squares, some of which are shaded with diagonal lines.

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6/2/05

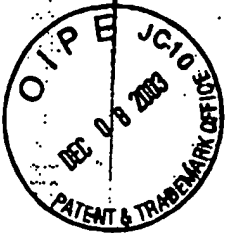
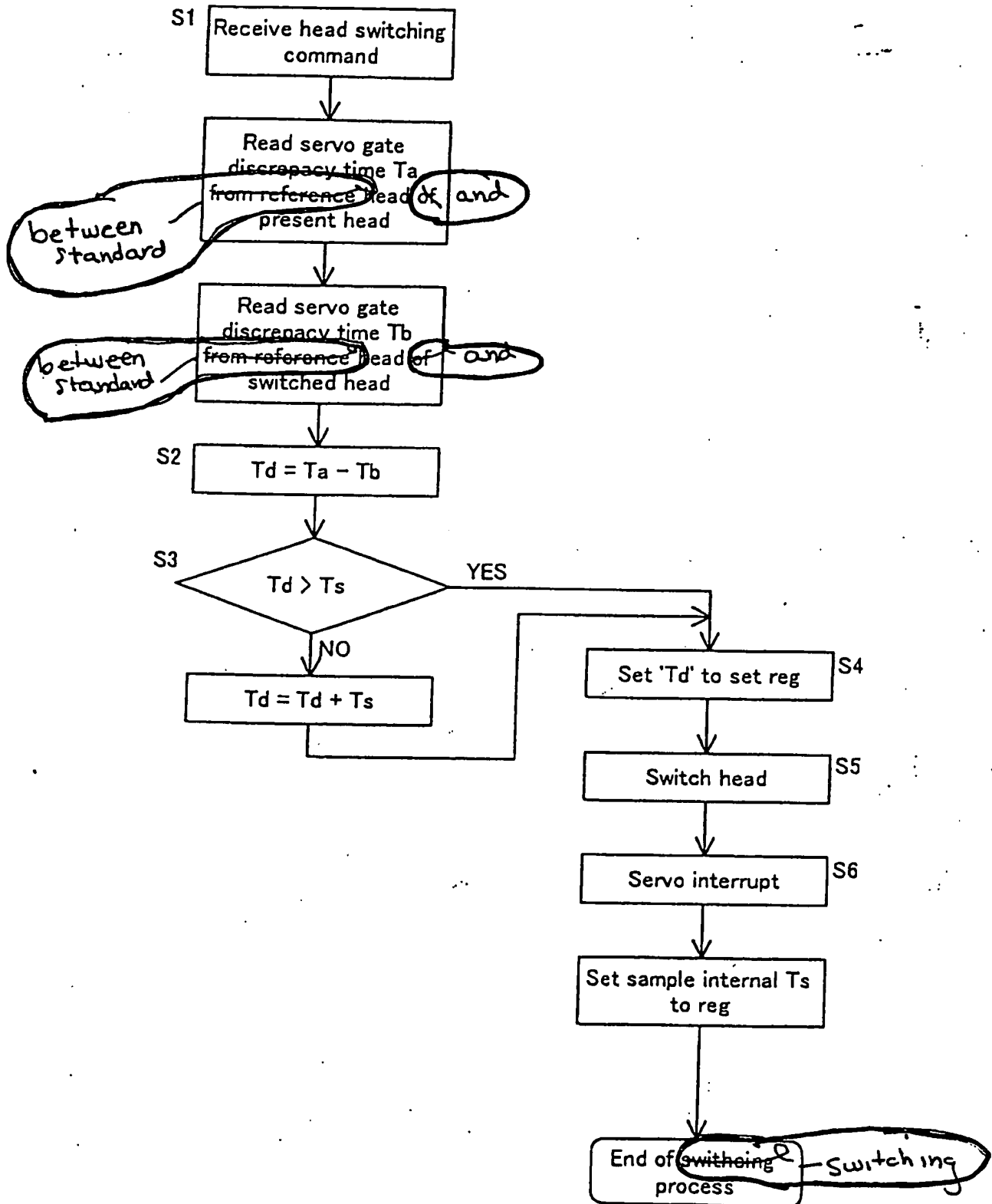


FIG. 4



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6/2/2005

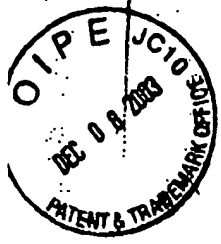


FIG. 7

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6/2/2005

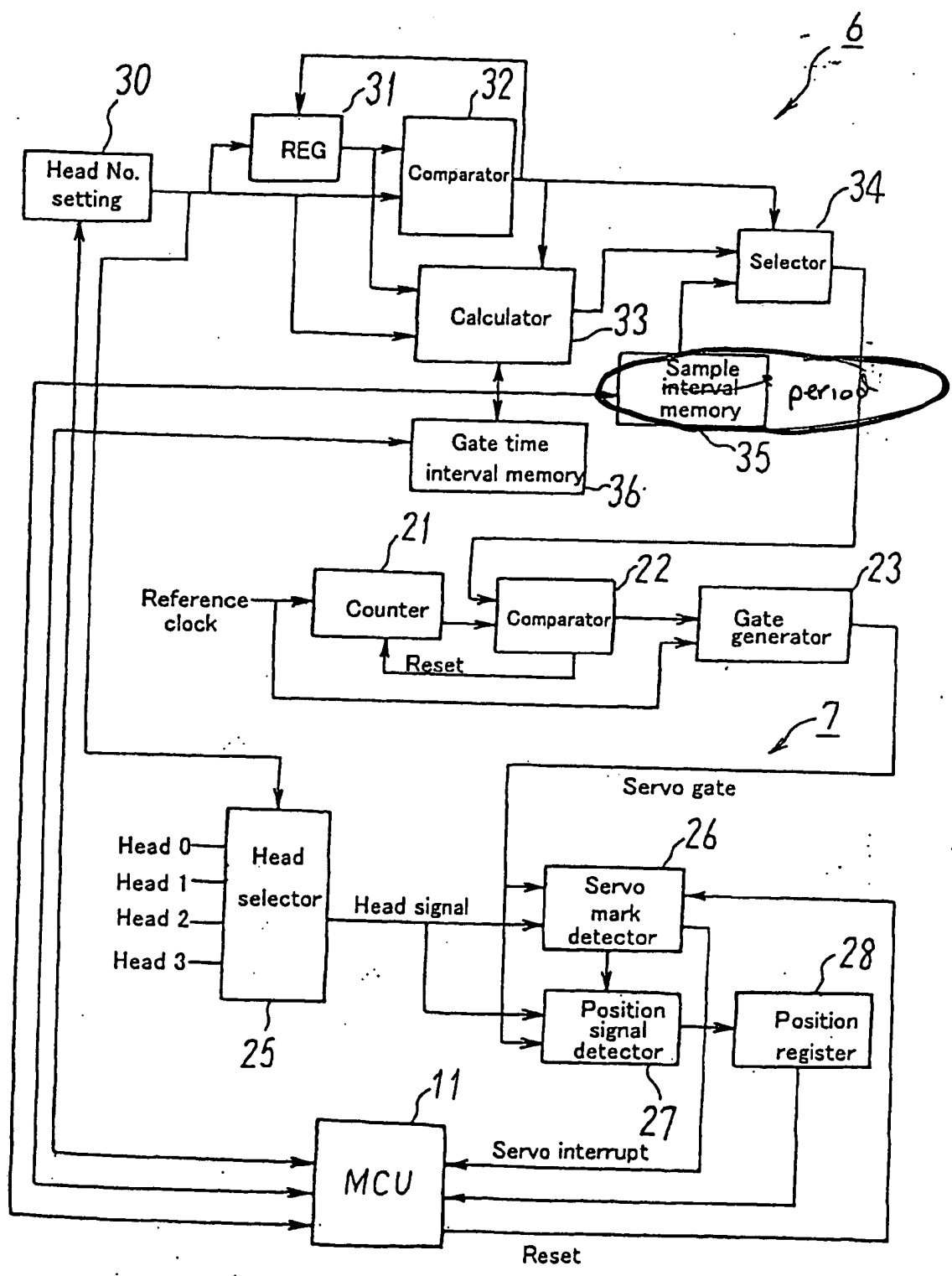
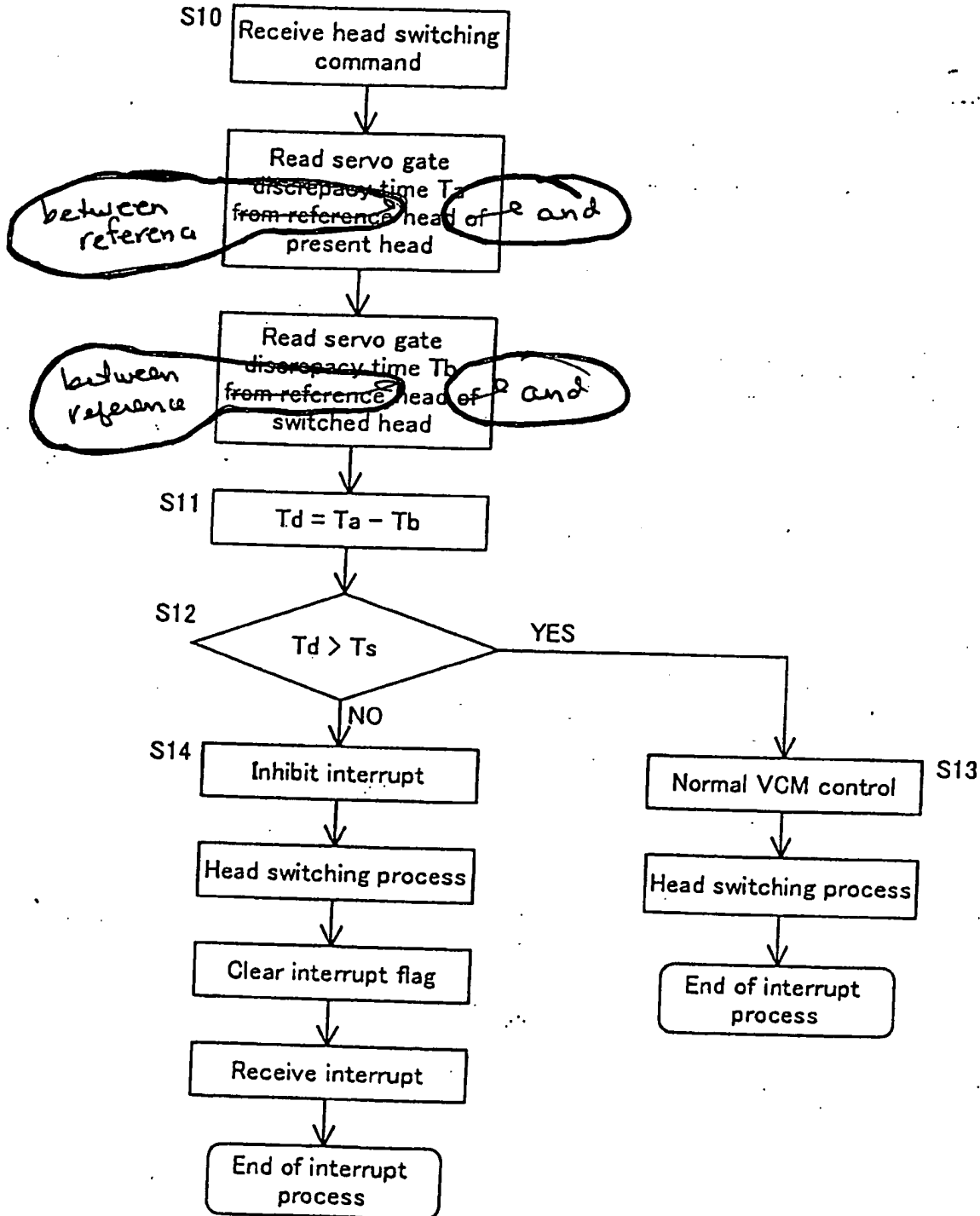


FIG. 8



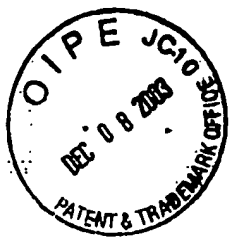
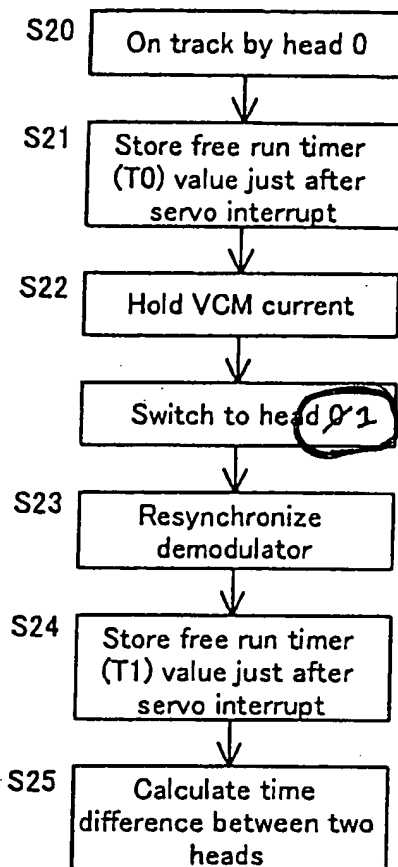


FIG. 10



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6/2/2005